

Automated Telephone Systems

Management Study

Report No. 98-01

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BACKGROUND

In the two decades since commercial voice messaging systems were introduced, phrases such as "voice mail jail" have come to express the frustration that many people feel with the technology. Customers complain that the systems are confusing and irritating designed not to help them but to avoid them.

Automated telephone systems have proliferated nonetheless because they have many advantages. They allow dissemination of routine information to large numbers of callers and free up staff to handle more complex calls. Since they can take many calls at once, they allow callers to reach the system instead of a busy signal. They can also give out information after business hours.

STUDY OBJECTIVE AND SCOPE

The objective of the study was to review the county s automated telephone systems to identify any problems that citizens might encounter. The scope was limited to the review of automated attendants intended for public use. Automated attendants are the telephone systems that give callers a recorded menu of options: "Press 1 if you have a question regarding..., press 2 for information about..." The study reviewed automated attendant systems in use as of April 1997, a total of 61 systems.

In King County, the individual agencies make the decision to implement an automated attendant, and they have responsibility for the content of the recorded messages. The Information and Telecommunications Services Division (ITS) in the Department of Information and Administrative Services (DIAS) provides consultation on designing the systems and maintains the supporting infrastructure.

GUIDELINES FOR EFFECTIVE, USER-FRIENDLY SYSTEMS

Recognizing that the best way to encourage callers to use an automated telephone system is to make it user-friendly, the voice messaging industry has developed the following guidelines:

- the introductory message should be brief;
- the system should offer no more than five options;
- the system should offer a rotary option, that is, a way for callers with rotary telephones to reach a receptionist;
- callers should be able to reach a person throughout the various recorded messages;
- there should be no "dead ends," where the caller s only option is to hang up and call again;
- callers should be able to repeat information and menus; and
- the option should be listed first, followed by the number to press (e. g., "For information about widgets, press 1.").

GENERAL CONCLUSIONS

The general study conclusion was that 95% of the automated telephone systems intended for public use did not meet all of the guidelines for user-friendly systems. The study also found that because agencies were not consistently monitoring or reviewing their systems after they were set up, current scripts of the recorded messages were not available for 30% of the systems, and 13% of the systems were not working properly.

MAJOR FINDINGS AND RECOMMENDATIONS

Finding 1. ***Ninety-Five percent of the countys automated attendants did not conform to all of the industry guidelines for effective, user-friendly systems.***

Audit staff evaluated the county s automated telephone systems against the industry guidelines listed above and found that only 5% of the automated systems met all of the guidelines.

The most frequently disregarded guideline was that callers have a way to repeat menus and information: 69% of the systems did not follow this guideline. Most (57%) of the systems also did not have a way for callers to reach a human throughout the recording. Almost half (49%) contained at least one dead end. In addition, 38% of the systems had more than five menu options, 21% did not have a way for rotary callers to reach a receptionist, and 16% had introductory messages longer than 30 seconds. On the other hand, almost all (94%) of the systems offered the option first, followed by the number to press.

The study recommended that any agency with an automated attendant that does not meet all of the industry guidelines revise or redesign its system(s) to be in conformance with all guidelines.

Finding 2. *Over half of the systems demonstrated other shortcomings that could also frustrate callers, such as poor, confusing organization and misleading instructions on using the system.*

Thirty-three systems (54%) demonstrated other shortcomings that, although not specifically covered in the guidelines listed above, could be frustrating to callers. They reinforced the impression that the automated telephone systems were designed not to be responsive to citizens' needs, but for the agencies' convenience. These shortcomings included poor organization and information flow that made callers listen to lengthy or redundant information, giving misleading or inadequate instructions on how to navigate the system, and not telling callers when they were transferred to another agency.

The study recommended that ITS develop written guidelines for the design and content of automated attendants to assist agencies in setting up automated attendant systems.

Finding 3. *Agencies were not consistently monitoring or reviewing their automated telephone systems after they were set up. Thus, 30% of the systems did not have current scripts of the recorded messages, and 13% were not working properly.*

For 30% of the automated attendants reviewed, the scripts of the recorded messages either differed substantially from the actual recording or there was no script at all. Programming errors were found in 13% of the systems, which resulted in their functioning incorrectly. For example, a caller who pressed a valid option would hear that they had made an invalid entry, and perhaps also be disconnected.

The study recommended that the Executive branch develop policies and procedures for monitoring automated attendant systems, including regular verification that the programming is functioning correctly and periodic review of the design of the system. ***The study also recommended*** that the Executive branch develop policies and procedures for cataloging and responding to all complaints from the public regarding county automated telephone systems.

Finding 4. *In a sample of telephone calls to automated attendants, the wait to reach a person ranged from no wait at all to twelve minutes.*

Audit staff called twenty of the highest volume numbers at three different times during business hours to determine how long it took to reach a human receptionist after choosing that option. While 72% of the telephone calls were answered in less than one minute, it took 12 minutes to reach an Information Specialist at Metro Rider Information.

The next longest wait was to reach a receptionist at Code Enforcement slightly more than 11 minutes.

The study recommended that agencies routinely monitor the length of the wait to reach a person from their automated systems in determining staffing for answering telephones.

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